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Peter Itzen & Simone M. Müller[*]

Abstract: »*Risiko als Analysekategorie für eine Geschichte des 20. Jahrhunderts: Eine Einführung*«. Risks are of particular relevance for the social history of the twentieth century. On the one hand, Western societies' economic growth gave impetus to the rise of new technologies. Technology, we argue, brought with it new possibilities, but it was also loaded with new risks. On the other hand, societies discussed and explored new notions of responsibility for risks, their management and mitigation. Both aspects changed the meaning and perception of traditional risks, such as natural catastrophes, sickness or falling into poverty. In this introduction, we explore the use of risk as a category of analysis for a social history of the twentieth century. In a form of double-intervention on time and methodology, we, on the one hand, hold risks as a 'phenomenon' to be of particular relevance – even characteristic for – the twentieth century; on the other hand, we posit that risk as an analytical category offers us new avenues into understanding modern societies in three important ways: (1) the importance of time and future in human actions and debates, (2) the dual nature of risks as discursively constructed and simultaneously material, (3) the social justice implications of this dual nature that were often unequally shared, be it nationally or globally. In the end, we argue, by linking the materiality of challenges and risks with how these were perceived and discursively constructed, we are better able to understand the rules and the changes that underpin historical societies and which are – as our authors show in this HSR Special Issue – very often determined in reaction to risks.

Keywords: Risk, risk society, security, resilience, vulnerability, technology, social history, twentieth century.

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Historical Social Research 41 (2016) 1, 7-29 | © GESIS
DOI: 10.12759/hsr.41.2016.1.7-29

1. The Paradigm of Risk in the Twentieth Century[1]

It was during the summer of 1935 when Erich Lauchs, mechanic and lorry driver for a private transport and haulage company, became the tragic protagonist in a story of ill-fated automobility. Lauchs was on his way from Berlin's city centre to one of the building sites of the German *Reichsautobahn* out of town. In his lorry, he transported construction material as well as more than two dozen workers sitting in the lorry trailer. In Berlin-Zehlendorf their journey came to a sudden halt. The brake linkage of the lorry was unstable. It had already been broken and welded before. During the journey leaving Berlin, it burst into pieces. Driver Lauchs could no longer control his vehicle. The lorry collided first with a tree, then with a lamp post. Several workers were thrown out of the trailer hitting the road head-on. Benches that had been provisionally built into the trailer were tossed on the street, taking with them several of the back passengers. One worker died instantly, two of his comrades died later in hospital. Several other passengers suffered severe injuries, often from the wood benches that had splintered into pieces when they had been catapulted out of the trailer.[2]

Accidents like this dramatic incident intricately link with conceptions of risks that were nearly omnipresent in modern industrial Western societies, where, among other aspects, an increasing preoccupation with the future had generated the notion of risk over the course of the twentieth century (Giddens 1998, 27). People encountered risks at home where their modern gas oven could accidentally kill them through carbon monoxide. They encountered risks on their way to work when participating in modern traffic as pedestrians, cyclists, motorbike riders, car drivers or passengers of trams, busses and airplanes. They encountered risks at their workplaces where malfunctioning or incorrectly used machines could injure them significantly. Finally, they encountered risks during their free time when jumping from bridges or airplanes for sporty leisure. Risks, in the broadest sense of the word, characterize the twentieth century and so readily lend themselves for academic research. Indeed, such a risky surrounding as Berlin's autobahn, for instance, calls for a 'systematic way of dealing with hazards and insecurities induced and introduced by modernisation itself,' according to Ulrich Beck (Beck 1993, 26).

[1] We would like to thank Carrie Andrews, Jörg Arnold, Franz-Josef Brüggemeier, Sabine Blum, Sebastian Haus, Birgit Metzger, Torsten Kathke and the anonymous reader for their insightful comments and their invaluable feedback. We would also like to thank Philip Janßen and the staff from *Historical Social Research* for their great support. This HSR Special Issue originated in a conference in Freiburg in July 2014 which was funded by the Freiburg Institute for Advanced Studies.

[2] Cf. source in *Bundesarchiv:* BArch R5/8307.

Historians, too, have in recent years started to occupy themselves with risks. Absorbing approaches from neighbouring disciplines, particularly sociology, they have developed an interest in risk as a topic (Lengwiler 2008; Zwierlein 2011; Brüggemeier 2014; Mohun 2013), also mirroring the increasing general interest in questions of safety and security (Tönsmeyer, Vowinckel and Kirsch 2010; Conze 2009; Zwierlein and Graf 2010).[3] In this HSR Special Issue, we want to build upon and expand on existing research by systematically exploring the use of risk as an analytical category for a social history of the twentieth century. As historians we are interested in how humans constructed risks, how they perceived them and which strategies they used to mitigate or manage them. Risks, we argue, were a prism bundling and connecting the economic, political and technological spheres with the social and cultural everyday. Articles in this HSR Special Issue *Risk as an Analytical Category: Selected Studies in the Social History of the Twentieth Century* analyse various contexts of risks typical for the modern Western world in order to explore those linkages. Our authors look at the health system, the social welfare state, the environment, mobility infrastructures, the national security apparatus and the workplace. They show how risk as an analytical category links the social everyday with larger structures, infrastructures and discourses of power and inequality and thus gives us new insights into a social history of the twentieth century.

In their analysis, historians of risks are confronted with a multitude of different phenomena. The contributions assembled here illustrate that risks take many forms and operate in many different fields: technical usage and development, scientific research, economic calculations, social relations and environmental discourse. Risk is no clear-cut category. One of the challenges in dealing with risk in historical analysis is the unclear nature of the meaning of the term risk. The term probably originates in the fourteenth century when merchants from northern Italy used it as a description of uncertain commercial transactions (Jung 2003, 543). Over the past decades, various disciplines, ranging from sociology and economics to the medical and natural sciences have introduced and discussed various definitions for risk and have thereby influenced historical discourses. In economics, for instance, risk often denoted probabilities that could be determined in mathematical models. Similarly, in the natural sciences hazards meant the potential negative consequence of a technology or specific situation while risk signified the quantitative probability that this hazard would materialize (Jung 2003, 545). Within the German legal system, risk became defined as a weak form of danger: While danger posed an immediate threat that demanded state action, risk signified a hazard that was less probable (ibid., 546). Sociologists also differentiated between risk and danger, but in a very different sense. Danger meant challenges that were not

[3] In Marburg and Gießen a Collaborative Research Center is entirely devoted to this research topic: <http://www.sfb138.de/home/> (Accessed November 3, 2015).

caused by human action whereas risk was most often understood as a possible future development that had its origins in human decision-making (Evers and Novotny 1987). Additionally, social scientists often distinguished between risk and uncertainty (on the overlaps between these categories see: Bonß 1995, 35-61) – a distinction that is also made by the psychologist Gerd Gigerenzer who claims that risk and risk taking always includes an element of deliberation that requires prior knowledge of the principle nature of the risk (Gigerenzer 2014, 35-8). Finally, these scientific definitions of risk often differed quite substantially from the colloquial use of the word that in everyday speech to denote a danger, hazard or threat. Sometimes, risk also takes on the meaning of chance (albeit a chance that usually is also a danger).

Working with this broad variety of risk definitions is key if we want to understand discourses in history. At the same time, this cacophony of definitions poses a methodological challenge. In the sources, historical actors speak about risk from many different viewpoints, sometimes mixing and merging several meanings at the same time. This multifariousness of meanings indicates that risk is an important concept that helps individuals and institutions to describe a large variety of situations. From the perspective of historical analysis, it seems that this nearly ubiquitous nature of the term is its central feature. As historians, we need to take note of these various meanings of the term risk in historical debates. They enable us to understand how people in the past evaluated and discussed phenomena that they regarded to have dangerous quality and why and when these evaluations changed. We follow a rather broad meaning of risk in this HSR Special Issue. We define risks as potential future events and developments caused by human actions and that are potentially harmful to human actors and their environment. As such risks carry both, a material as well as a discursive quality and are inherently anthropocentric.

2. Scholarship on Risk

In the same way that risks cover a whole range of different phenomena, scholarly influence for historical studies from other disciplines is wide and varied – as is the debate within the field of history. In the past, historians have benefited as much from the pioneering sociological studies on risk as they have been influenced by more recent trends emerging out of psychology on resilience and vulnerability. While the term was not always explicitly invoked, since the 1980s concepts of risk have also been central to studies in the field of environmental history, medical history, labour history and the history of science and technology. By proposing the term risk as an analytical category we also hope to offer a common ground for these historians of various backgrounds.

Historians working on risk have benefited greatly from the pioneer sociological studies of Ulrich Beck, Anthony Giddens and Niklas Luhmann. While the

sociological debate has moved on beyond its pioneers (for more recent developments see: Zinn 2006), the historical debate on risks in the twentieth century is still primarily shaped, informed and influenced by their works. Their concepts and theories of the modern risk society, risk as characteristic of a future-oriented society and risks as part of human decisions are still useful when employing risk as a category of analysis for a social history of the twentieth century.

Ulrich Beck introduced risk as a major interpretative tool into scientific debate. He saw a 'risk society' to have emerged by the late twentieth century. Such a society was the direct consequence of modernisation processes that had created 'new' risks. Unlike former risks, these new risks such as pollution or nuclear accidents could not be mitigated by mechanisms of intelligent risk management. Classical risks of the nineteenth century (for instance workplace accidents) could be prevented by improved safety measures or compensated by insurance schemes. The risk of nuclear disaster could not. The new technologies of the late twentieth century produced risks whose consequences were not limited in space and time and that could hardly be controlled, therefore potentially causing irreversible damages (Beck 1993).

Similarly to Ulrich Beck, Anthony Giddens interprets risk as a typical phenomenon and notion of modern industrial society. For Giddens, one of the central features of modernity is its orientation towards the future. While traditional societies tend to look at the past to interpret current events and developments, modern societies believe in the capability to 'determine' their 'own future rather than leaving it to religion, tradition, or the vagaries of nature' (Giddens 2000). While taking risks always implies the possibility of negative outcomes, it is also one of the prerequisites for modern innovations.

Niklas Luhmann's readings of the sociology of risks, finally, established the difference between danger and risk. Luhmann saw risks as a consequence of human decisions. A decision always brings with it the risk that it was the wrong decision (Luhmann 2003). Luhmann's classic example of such a dilemma is the umbrella. In a world with umbrellas there is no chance to live risk-free. If a person leaves the house without an umbrella, he or she might run into the risk of getting wet when it rains. If a person takes the umbrella upon leaving, he or she might encounter the risk of forgetting the umbrella someplace else and also get wet. Risks are always consequences of human actions. This notion plays into the hands of historians who want to explore why and when humans act in relation to risks.

According to Luhmann, debates about risks are a predominantly modern phenomenon. Traditional societies, i.e. societies prior to the mid eighteenth century, were more concerned with external threats and dangers, events that people saw as unrelated to human action. According to Luhmann, this shift correlated with the growing dependence of the future on human decisions – a tendency which was the result of technological advances (similarly Koselleck 1981). This advancement, however, also increased human belief that it was pos-

sible to shape the future. Authorities (such as religious figures) who had earlier seemed to control future events and who used to be beyond human influence seemingly decreased in their importance. Technical advances created new problems, however: Complex technology is rarely risk-free. Increasing knowledge about the construction of dikes, for instance, could become an incentive to settle in regions that are particularly prone to floods. Moreover, late modern societies have become so complex that it became difficult to attribute risks to concrete actions. This makes risk regulation and risk management a complex matter (Luhmann 2003, 35).

Beck's, Giddens' and Luhmann's concepts and historical assumptions were met with great interest among social and environmental historians who at around the same time worked on related topics and motivated them to integrate and react to their concepts. Beck's assumption that modernising processes often produce unintended and sometimes dangerous consequences, for instance, is a valid notion and has strengthened historians' sensibility for the complex nature of modernity. Anthony Gidden's and similarly Niklas Luhmann's point about future orientation has certainly influenced our argument that risks create 'double-time' (see 3. in introduction).

At the same time, these scholars' more general assumption that only modern societies debated risks, or more particularly Beck's time scale and chronology of the 'risk society' originating in the 1970s and 1980s, has largely been rejected by several historians (Mohun 2013; Zwierlein 2011, 21-4; Zwierlein and Graf 2010, 14-5). Scholars have, for instance, pointed out that the enhanced possibilities of modernity also often provided the means to deal with risks in a way that was unknown to societies prior to the twentieth century (Brüggemeier 2014, 349-50). Indeed, historians need to have a close look at the precise processes that take place around the production of risks and the response to it. In this HSR Special Issue, however, we argue that risks are, albeit not exclusively, particularly relevant for the twentieth century.

Alongside these sociologists, historians, too, have strongly influenced today's historical risk discourse. Studies in the fields of environmental history, the history of social inequality during the age of industrialisation, the history of science and technology and the history of medicine dating from the 1980s onwards have gathered information that created a critical mass upon which nowadays a social history of risks can be built. Although these early studies did not explicitly use risk as a category of analysis, their material and research was often risk-related. Historians interested in infectious diseases in industrial societies, for instance, were often confronted with contemporary debates concerning causality and probability regarding these diseases. Long before the term became en vogue in research, risk was an important term for historians, too.

Historical risk debates were particularly important for environmental historians working on aspects of pollution and on the relationship between nature and industrialisation (Brüggemeier 1996; Uekötter 2003; Bemmann 2012;

Brüggemeier and Rommelspacher 1989). Implications of high technology (such as nuclear technology) were another key aspect where environmental historians encountered risks in their research (Radkau 1983). Technological progress, as these studies suggest, seemed to come at the trade-off of environmental damage posing risks for human living.

Parallel to debates among environmental historians and to a degree influenced by French philosopher and sociologists, François Ewald, social historians began to research another consequence of industrialisation – workplace accidents. Ewald had claimed that the modern welfare state resulted from political debates on the risks of workplace accidents and the subsequent introduction of insurance systems (Ewald 1993). These insurance systems, in turn, made workplace accidents a normal feature of industrial societies (Rabinbach 1996; Aldrich 1997; Sellers and Melling 2012; Moses 2012; Machtan 1985; Milles and Müller 1987). In recent years, scholars challenged Ewald's interpretation and research on industrial accidents and insurance systems has become more varied. On the one hand it focuses more strongly on preventive measures and the role of experts (Aldrich 1997; Lengwiler 2006), and on the other hand on global and transnational aspects of industrial accidents and the various corresponding systems to mitigate their effects (Sellers and Melling 2012; Moses 2012).

Historians of science and technology with an interest in mobility have been debating risks of traffic and transport for a long time. Initially, their interest linked with the period of industrialisation and with a particular focus on railway systems and their perception (Schivelbusch 2000; Aldrich 2006). Since the 1990s, several studies also concerned themselves with debates on risk that took place after the introduction of the automobile (Burnham 2009; Luckin 1997; Blanke 2007; Stieniczka 2006; Bartrip 2010; Esbester and Wetmore 2015; Zeller 2011; Möser 1999). These studies have heightened our understanding of how societies react to newly arising risks. They also highlighted the role of technology and its materiality in these debates (Wetmore 2004).

Beginning in the 1990s in Britain and the United States, risk also became a topic for historians of medicine. Interested in concepts of public health, studies analysed how health experts pushed risk debates since the mid-twentieth century – particularly in relation to 'unhealthy' practices like smoking, drinking, drug abuse or pursuing 'promiscuous' sexual relationships (Rothstein 2008; Berridge 2003, 2013; Engel 2006; Robinson and Watson 2012; Tümmers 2012). They discovered how social experts attempted to single out risk factors for diseases and health hazards and to develop a system of risk diagnosis (for instance with the help of health statistics), prevention and management (Hähner-Rombach 2015; Lengwiler 2010; Schenk, Thießen and Kirsch 2013). Recently, also the history of risks of medical treatment has become an important research subject of medical historians (Schlich and Tröhler 2006).

In dealing with these various risk related historical developments and debates, historians became interested in new theoretical approaches, such as the concept

of ‘accident’ (Figlio 1985; Cooter and Luckin 1997; Luckin 1993) or more recently in the concepts of ‘resilience’ and ‘security’ (Zwierlein and Graf 2010). These ideas enabled historians either to uncover hitherto disregarded dimensions of history or to use them as tools to interpret historical developments.

Both concepts have been influential among environmental historians. The notion of societies’ ‘vulnerability’ and ‘resilience’ in the face of all kinds of challenges has been influential in debates within the environmental humanities in recent years. These concepts had their origin in psychology and ecological sciences (Schenk 2015; García-Acosta 2002; Mackowiak, Masius and Sprenger 2010). Already in the 1950s, but especially since the 1980s, psychologists have begun to discuss the different forms of ‘resilience’ of people to adapt or to react to psychological stress (Block 1950; Block and Block 1980; Beardslee 1989). With the corresponding term ‘vulnerability’ psychologists tried to describe and analyse individual and collective human weaknesses that are laid bare if humans are exposed to stress. Since the 1970s, these concepts have also been applied to the study of ecological systems where they were used as tools to describe and explain the success of certain species in the face of external stress (Holling 1973; Gunderson et al. 2002). Sociologists soon took up the concept of resilience and sometimes linked it to the rising interest in studies on security (for instance Kaufmann and Blum 2012; Kaufmann, Blum and Wichum 2014).

The double concept of resilience and vulnerability is highly attractive for historians interested in the history of risks. It may be one of the main interpretative paradigms that help to make sense of how modern societies created risks and how they reacted to them. Debating the stability and instability of social and political systems is, of course, not new. Yet concepts of ‘resilience’ and ‘vulnerability’ allow for a close look at various attempts to create stable societies or improve instable ones. These concepts help us understand processes of learning and they enable scholars to compare the various changes in modern societies.

The history of the research concerning concepts and historical subject matters related to risk demonstrate the pervasiveness of the topic in many different fields of history. Recent research has accumulated historical material and theoretical knowledge that makes it worthwhile to explore the potential of ‘risk’ as an analytical category more systematically.

3. Risk as a Category of Analysis

In this HSR Special Issue, we aim to explore the use of risk as a category of analysis for a social history of the twentieth century. In a form of double-intervention on time and methodology, we, on the one hand, hold risks as a phenomenon to be of particular relevance – even characteristic for – the twentieth century; on the other hand, we posit that risk as an analytical category offers us new avenues into understanding modern societies in three important ways.

Risks are of particular relevance for the social history of the twentieth century. While risks as a consequence of human actions are constituent for the human condition, their quantity and quality drastically increased during the twentieth century – as did the means to combat them. These developments were accompanied by a growing debate about risks. By the end of the twentieth century, Western sociologists even interpreted their society as a 'risk society' characterised both by the production of risks as well as the debates on risk management. In the twentieth century, we argue, the quality of risks and the debates concerning risks were particularly influenced by the character of technologies on the one hand and new notions of responsibility on the other. Both aspects changed the meaning and perception of traditional risks, such as natural catastrophes, sickness or falling into poverty.

In the twentieth century, Western societies' economic growth, and with it free capital to invest in research and development, gave impetus to the rise of new technologies. *Technology*, we argue, brought with it new possibilities, but it was also loaded with risks. The introduction of motorised traffic at the end of the nineteenth century, for instance, ushered in new opportunities for modern societies – new options for business enterprise, for the experience of nature, for the transport of people and goods, to name but a few. Like many other typical risks of the twentieth century the development of car traffic was also representative of the trade-offs of risks: Moving people in a lorry is faster and more effective than transporting them with carriages and letting them carry their equipment to the building site. At the same time, automobile traffic was loaded with the risk of deadly accidents – whereby technology was also used to reduce risks and enhance safety. Improved braking systems and the introduction of traffic lights, for instance, considerably reduced the risk of car accidents (Stieniczka 2006). Throughout the course of the twentieth century, new options and possibilities arose, multiplied and accelerated with the development of new technical devices whose ambivalent nature and possible dangers were not always fully understood. Modern technologies embodied a certain ambiguity as they oscillated between purposes of 'safety,' 'progress' and 'usefulness' on the one hand and questions of 'side effects' and 'unintended consequences' on the other. How to control these ambiguities, however, remained debated (Raphael 1996; Etzemüller 2009; Brückweh et al. 2012).

Technologies' ambiguity becomes even more visible when we turn our attention to people's leisure activities. Starting in the late nineteenth century technologies were also becoming a means to experience risks as a fun event (Poser et al. 2006). Roller coasters, car and yacht racing as well as the rather recent phenomenon of bungee jumping enabled people to live through risky situations and experience thrill and suspense without actual danger. Experiences were inscenated at the border of both technological means and bodily capability (ibid). This ambivalent role of technology also demonstrates the *material quality* of risks. The risks involved in riding a rollercoaster or jumping out of

an airplane were always those of physical injuries involving one's own body. Risks, we argue, were never solely constituted as theoretical concept. We need the material of the everday experience as part of the analysis to fully understand historical actors' decisions of risk mitigation and risk taking.

Risk management was always closely linked to issues of *responsibility*. These issues deal with questions of who or which institution has to take responsibility for the recognition and the prevention of risks, for the development of protocols of risk management and for the aftermath of an accident, mishap or catastrophe that was the result of a risk. The answers to these questions differed considerably both among the various Western nations and within the twentieth century.

Generally, the twentieth century witnessed an increase in regulations and corresponding responsibilities. The regulation of these risks were dependent on the modern administrative state that was capable of developing regulations and upon a new expert culture that generated knowledge in order to find solutions that could actually help to reduce risks or make them more acceptable. Additionally, risk responsibilities tended to be spread more widely among different parts of society than before. Insurance systems and even some elements of the welfare state had been institutionalised already prior to the twentieth century, but it is only after 1900 that these components of risk management were developed systematically. In Germany, for instance, the fundamental structure of the German social security system had been developed as early as the 1880s; only in the 1950s, however, did today's system of the welfare state come about with the introduction of pension reform. This broadening of responsibility was an important element to make modern societies more resilient against the risks that were associated with Western modernity.

Over the course of the twentieth century, the debate about and the construction of new precautions and forms of risk management gathered speed rapidly. Moreover, in the face of new and rising economic, cultural, technological, social and legal possibilities to deal with risks, the debate about precautions did not stop at the regulation of newly emerging risks. Regulatory systems also began to deal with some of the more fundamental risks of mankind, such as those connected with natural catastrophes, infectious diseases or poverty. During the twentieth century, nearly all Western societies developed mechanisms to counter social risks and to guarantee their citizens social benefits. Notions of responsibility, finally, were intricately linked to the concept of social justice prevalent in a society. Understandings of the relationship or even intersectionality of race, class and gender, for instance, often informed actors' responses to risks and the way they thought about the question of who should take responsibility.

Read as a whole, our HSR Special Issue shows how perceptions of and responses to risks grew in importance over the course of the twentieth century. At the same time, different national and social actors found different strategies to deal with and mitigate risks as they encountered them in their daily lives. We

hope that readers take on the comparative challenge contained in this HSR Special Issue as a whole.

Beyond the analysis of risk as a historical phenomenon characteristic for the twentieth century, we put forward the use of risk as a methodological tool. As such, risk offers us new avenues for understanding the functioning of historical societies in general and for a social history of the twentieth century in particular. It does so in three important ways: in stressing the role of time and future in the human actions and debates, in recognising the importance of materiality and, finally, in analysing the varying notions and implications of responsibility and social justice in historical societies. In the end, we argue, by linking the materiality of challenges and risks with how these were perceived and discursively constructed, we are better able to understand the rules and the changes that underpin historical societies and which are – as our authors show in the following contributions – very often determined in reaction to risks.

1) *Risks simultaneously determine actors' visions of the future as well as their present*. Risks create double-time. Actors' evaluation of situations as 'risky' or potentially harmful or costly in the future shape how they relate to those situations in the present. They may justify current infrastructural programmes with their intent to avert potentialities of harm. The rectification of the Rhine, for instance, was crucial to avert an alleged natural apocalypse which would destroy people's homes and livelihood, according to engineer Johann Tulla. Similarly, since the late nineteenth century, state as well as private actors have been engaging in measurements to ensure physical integrity, such as vaccination or road safety education. Such measures of prevention anticipate either a risky future that should never become reality or reactions to a risky present. In the context of medical history and vaccination, one might even argue that peoples' ambition to manage health risks has eradicated a possible risky future altogether by extinguishing particular diseases, such as small pox, tuberculosis or polio seemingly once and for all. Preventive actions in the present are geared to prevent disasters, accidents or industrial hazards – which may be foreseeable. The example of vaccination also shows how actors create path dependencies and institutionalise the future. They create health education programmes, establish medical research institutions, or implement policies of mass vaccinations. Risks thereby create double-time. Future and present are intricately linked as anticipations of a foreseeable future determine actions in the present.

For scholars, this concept of double-time poses a particular challenge. Our analysis of primary sources' 'now' is overshadowed and determined by these very actors' vison of a tomorrow. Cultural discourses and social contexts of futurity are just as important as current realities of economic, technical or environmental conditions that create risk potential in the first place. An actor's, or even a society's, religiosity, for instance, does play a great role in how it determines, evaluates and reads the future. It makes a huge difference for concep-

tualising precaution and prevention whether an actor interprets a disease, for instance, as God-given or man-made (Koselleck 1981). The postmodern industrial societies, as Ulrich Beck and others have shown, have individualised and de-sacralised many risks, seemingly allowing for a larger spectrum in explaining and managing the future. Simultaneously, with the creation of the modern (welfare) state, contemporaries have created other path dependencies of prevention which again limit options of future behaviour. Finally, when talking about the concept of resilience, for instance, a third time dimension plays an important role. Resilience denotes society's ability to adapt to unforeseeable risks now past. Catastrophes, accidents or disasters then activate social, political and economic change. Contemporaries' evaluations of such moments of crises mitigate simultaneously both, their current crisis management as well as their prevention of future forms of similar crises. In the end, risks represent the focal point for past, present and future and so bring together cultural and social evaluations of past and future with socio-economic and political realities of a historical present.

2) *Risks depend on human actions and perceptions and as such they are necessarily inherently anthropocentric. At the same time, risks also have a strong material quality that influences our debates on them*. Impending earthquakes, for instance, may not be taken as risks if they go unnoticed or without causing any damage or harm to people and their environment. In the end, it is not the earthquake, but human's choice to settle in an earthquake-prone region which creates the risk. Similarly, while viruses and bacteria have always caused infectious diseases human's 'interaction' with them could only be recognised as risky once they were discovered at the end of the nineteenth century. The case of hazardous waste material, furthermore, shows that society's 'natural' response to risk are often attempts of ostracism – risks are moved out of sight, and consequently often also out of mind (Proctor and Schiebinger 2008). The world's most toxic spot, for instance, is an unknown atoll in the middle of the Pacific. Almost entirely forgotten in the middle of nowhere, it serves as the disposal site for the atomic remnants of the Cold War. The history of risk so seems to link with a history of human discovery, of knowledge, of visuality.

In their anthropocentrism, risks carry an inherent material dimension. People define as risky what they perceive as harmful to their health, their economic prosperity and their natural environment. Chemical weapons, HIV, smoking and drugs or eating behaviour that leads to obesity are all matters which society constructed as 'risks' whose harmfulness affects our body. Similarly, poverty brings with it a material dimension, representing a direct threat to our health. Industrialisation and the modern welfare state have eradicated the risk of starvation almost entirely. Still, low-income households are more prone to suffer from consequences of malnutrition. Debates centred on war invalids exemplify how a society's risk tolerance towards physical integrity can change. After World War I, as Wendy Gagen illustrates, social perceptions of masculinity

changed in Great Britain to accommodate the invalid solider as still 'masculine' (Gagen 2007). Today, images of dying soldiers, as of US Lance Corporal Joshua Bernard who was shot and killed in Afghanistan, ignite public debates on the tolerability of such risks.[4] Professional soldiers knowingly take up a profession that can be health threatening and lethal; simultaneously various societies around the world debate whether such a risk is worth fighting a war in the first place. Such debates lead to questions on what do to with the invalid soldier. Moreover, questions of eligibility to invalid insurance from war injuries also speak to issues of responsibility and compensation. It took several lawsuits throughout the period from 1977 to 1984 before veterans of the Vietnam War were compensated for injuries stemming from their exposure to Agent Orange and other chemicals. To this day, children of male veterans – in contrast to those of female veterans – suffering from birth defects are not recognised as Agent Orange victims.[5] This debate further relates to the moralising of risks and the worth of a life in general (Murphy and Topel 2006; Viscusi 2004). There seem to exist 'good' and 'bad' risks, some are covered by our health or work insurances, others are not.

3) *While a history of risk is concerned with the consequences of risks, these consequences are not shared equally.* An accident or a serious illness will have drastically different material consequences on affluent and less affluent persons. Risks so intersect with other categories of analysis, such as race, class and gender and they affect ethnicities, social classes and gender in very different ways. These effects can be mitigated or strengthened when risks are recognised. If, how and under which circumstances this is done offers insights into conceptions of social justice – and under which conditions these notions either change responses to risks or are changed themselves. How workplace accidents are dealt with, for example, is symptomatic for the relationship between entrepreneurs and workers. Or, to choose an even more prominent example, how the material and social costs of a disaster at a chemical plant is dealt with is central to understand which notions of social responsibility are in place in a society. The example of Hurricane Katrina in New Orleans, for instance, has vividly shown how racial and social markers play a distinct role in the response to such a catastrophe – and in the way the material burden of dealing with the aftermath of it is shared and distributed (Lachlan et al. 2009; Battistoli 2013)

Nearly in all circumstances risks represent social conflicts – either because they involve several persons in different positions (for instance the worker and the entrepreneur in a plant or a car driver and an injured pedestrian in a car

[4] *Daily Mail,* Pictured: The heart-breaking image of a dying U.S. marine that has reignited American divisions over the Afghan war, September 7, 2009.

[5] U.S. Department of Veteran Affairs, Veterans exposed to Agent Orange <http://www.benefits.va.gov/compensation/claims-postservice-agent_orange.asp> (Accessed November 1, 2015).

accident) or because major risks like industrial disasters trigger huge financial costs. This prompts the question how these costs are distributed locally, nationally or globally. In times of global production chains and hazardous waste trade, risk can transcend national borders and regulatory systems (Clapp 2010; Asante-Duah 1998). For instance in 2013 the roof of a textile production site in Bangladesh collapsed and killed more than 1100 workers who were producing textiles for European companies. In search for minimal production costs these companies had externalised certain risks to the global south where different regulatory standards exist (Similarly see Lessenich's concept of the externalizing society: Lessenich 2015).[6] Because there are no internationally binding legal standards this system of comparative advantage is inherently prone to produce social global injustice in risk distribution.

4. Contributions in this HSR Special Issue

Risk, its conception, perception and mitigations play a role in the history of poverty and social inequality, in medical history, in environmental history, in the history of modern technology as well as in the history of the modern economy. This HSR Special Issue cannot deal comprehensively with all those fields in which risks are important. Still, we aim at presenting some of the most important topics when employing risk as a category of analysis for the history of the twentieth century.

The HSR Special Issue starts out with a conceptual exploration of what the history of risk actually is and why it matters for historians to concern themselves with this area. *Arwen Mohun*, a leading authority in the field, argues that mankind's reactions to risk are one of the prime reasons for the development of civilised societies. Historical societies develop and change in response to challenges and risks. The importance and omnipresence of risk and the societal reactions do present historians of risk with the difficulty that it is often virtually invisible as a topic: Risk is so ubiquitous that many other established fields of history already deal with aspects of the history of risk, but without reflecting about its nature. Mohun argues that practical research, a common methodology and the critical use of sources can create some common ground for a debate for scholars who are interested in the history of risk.

Stefan Kaufmann and *Ricky Wichum*, two sociologists, remind readers that the current surge of topics related to security is not necessarily caused by specific events such as 9/11, Fukushima or similar catastrophes. Rather, the constitution of functionally differentiated societies allows the application of security and

[6] BBC, Bangladesh factory collapse toll passes 1000, May 10, 2013.

risk discourses to all types of issues and phenomena, even though security and risk only went viral as universal societal problems in the late twentieth century.

One of the consequences of Ulrich Beck's book on the 'risk society' is that we still most often associate risk with the second part of the twentieth century. *Malte Thießen*'s article on one of the most important mechanisms of risk prevention is a reminder that current risk debates can look back to far older traditions. Debates on the advantages, but also on the risks of vaccinations formed a widespread and important discussion in the first decades of the twentieth century. Interestingly, Thießen can also show that a close analysis of risk debates can question and undermine established readings of the twentieth century.

Jörg Arnold's article brings us back to the important aspect of risk as socially and culturally constructed. Focusing on discursive constructions of the nature of coal mining and coal miners in the UK in the 1970s and 1980s, he shows how British coal miners mutated from being the objects in a risky workplace, to being the risky subjects in political battle. Up until the coal strike of 1984/85, public perception saw the coal miners as a 'special case' on account of the hazardous working conditions in which they laboured. By the time of the strike of 1984/85, opponents of the miners' cause had turned the argument on its head. The real risks, they argued, were not health hazards, but the miners themselves.

In Germany, the 1980s saw numerous debates on threats and uncertainties. It is therefore little wonder that Ulrich Beck's study on the 'risk society' was published in the middle of that. With the controversies about HIV/AIDS, *Sebastian Haus* takes up one of these intriguing risk debates of the 1980s. He demonstrates that risk in this context did not only mean a threat or a technique of calculating future events. Risk also designated a specific epistemological constellation, a crisis of (scientific) knowledge. Focusing on the West German gay community, Haus analyses how homosexuals coped with an uncertain epistemological situation in which the medical status of HIV/AIDS was far from being evident and in which gay sexual behaviour was made responsible for the emerging epidemic. Haus shows that these concerns with AIDS risk can be seen as specific reactions to a larger crisis of knowledge quite typical for 'risk societies' of the late twentieth century.

What are the major driving forces in a history of risk? Economic factors, such as scarcity and redistribution of wealth on the one hand, and actors – experts and state institutions, for example – on the other hand certainly count among the most important. *Peter Itzen* adds law as an important driving force to this list and analyses how legal debates influenced the role of state institutions in their fight against hazardous weather on the streets. He demonstrates how the law both reacts to changed public expectations and self-evidences, but also how law re-enforces and stabilises these new expectations. Similarly, *Kai Nowak* takes up aspects of risk and governmentality. What were the methods which nation states employed to make their citizens less risk-prone? As the introductory example of the unfortunate Erich Lauchs illustrated, automobility

represented one of key 'new' risks in modern industrial societies. Nowak takes up the 1950s '*Verkehrskrise*' (traffic crisis) in the Federal Republic of Germany to extrapolate some of the coping mechanisms. During that decade, the number of cars on German roads had increased rapidly. The number of accidents and fatalities had risen just as steeply in a relatively short time span. By examining public traffic education campaigns and expert discourse Nowak explores how the notion of self-control, and so a 'vernacular' mechanism of risk mitigation, gained more and more acceptance among road safety experts and eventually helped to establish a paradigm change in Western German traffic education.

Another important field for risk governmentality of the twentieth century was social policy. Meike Haunschild, Sarah Haßdenteufel and Felix Krämer each explore the interrelation between the risk of poverty as a new risk and state and public responses to it. The authors employ examples from Germany, France and the United States. Thus if read in sequence, their contributions allow for a thorough transnational comparison. *Meike Haunschild* starts off with analysing the debates of the expansion of the welfare state in Western Germany during the 1950s. As she demonstrates, this debate is read as a risk debate, for preventive measures against poverty risks were considered by certain political groups to produce a new risk, namely that the state might gain excessive power over its citizens. The weighing up of individual freedom on the one and social security on the other hand coined the debate on, as well as the organisation of, the Western German welfare state.

Meike Haunschild's contribution about the debates on the ambivalences of social welfare policy makes for an interesting comparison with *Sarah Haßdenteufel*'s article on the debates about social risks in France during the 1970s and 1980s. Haßendenteufel depicts how during these two decades in France poverty gradually was re-discovered – not least because it now seemed to threaten not only the social fringe, but became a social risk also for members of the middle classes and thereby politically relevant. As a result of the debate and the changing conceptions of what social risks entailed a new system of unconditional social benefits was introduced – a paradigmatic shift in the French social welfare system.

Felix Krämer explores the 'deadbeat dad' as a contemporary figure originating in the Reagan era. His article questions risks that were morally redirected in the 1980s – addressed towards particular groups of men. After setting the question in relation to contemporary masculinity studies, the author aligns 'deadbeat dads' with a history of indebtedness and default. By scrutinising how a feminist claim to secure alimony for single mothers was integrated into a neoconservative project and the state's retreat from welfare in the United States, Krämer analyses TV newscasts displaying the prosecution of delinquent fathers. Adopting a discourse-analytical perspective, he sketches out how the

figure of the male breadwinner resonated in claims for economic and biological responsibility during the Reagan years.

Of the established historical sub-disciplines, it is probably environmental history which has the longest tradition of dealing with questions of risk perceptions and risk mitigation over time. *Nicolai Hannig* proposes a narrative both for a history of risk and for an environmental history that picks up research on the perception of risks and catastrophes. Comparing risk regimes of the nineteenth century with newly emerging concepts in the twentieth century he describes a shift from a prevention oriented regime which aimed to block and avert risks to a system that recognises that risks in complex systems and modern societies are unavoidable so that attempts for their complete prevention will therefore often fail or produce unintended consequences.

Simone M. Müller, finally, shows how the material approach of environmental history can enrich historical analysis working with risk as a category. In her contribution on the disposal of outdated chemical weapons she points to the dual character of those weapons – simultaneously risky because of their chemical character and a means to create a sense of safety for the Western world engaged with its Cold War enemy in a struggle for normative survival. Similar to Jörg Arnold's contribution on coal miners, her article shows how risk is socially and culturally constructed and how different, and even contradictory, perceptions of 'riskiness' and 'safety' can settle on the very same object.

5. Conclusion

The contributions of this HSR Special Issue demonstrate that a history of risk can contribute substantially to our understanding of modern societies in general and to a social history of the twentieth century specifically. Risks, risk perceptions and attempts to mitigate them or their effects, are influential in many social fields during the twentieth century. These range from the reaction to social injustice and attempts to avert the threat of poverty, to the debate on health hazards like HIV or the search for solutions to environmental threats. The articles show that a history of risk can deepen our understanding of these various fields of historical research. Sometimes they may even challenge established readings and make clear that our conventional historical chronologies may be flawed, for instance because they ignore important societal developments that a history of risk can illuminate. Everyday risks often have a much more intense effect on individual lives than do great political debates. How a society reads these risks and how it reacts to them is therefore a legitimate and highly important research topic in its own right. Research on risks sheds light on the different processes of learning and adaption that led to the establishment of new risk regimes and helps us understand why and to which degree societies

were resilient against the challenge of risks and under which circumstances an adaption seemed necessary.

Special References

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